weight from about 35 to 90 percent of a copolymer selected from the group consisting of ethylmethylacrylate, ethylbutylacrylate, and ethylvinylacrylate, and from about 10 to 65 percent of a co-polyester or thermoplastic elastomer selected from the group of co-polyether-ester and co-polyester-ester block copolymers.

12. (Once Amended) A laminate material in accordance with claim 10, wherein the polymeric coating [is] has a basis weight in the range of 22 to 28 grams/meter^2.

REMARKS

Responsive to the Official Action mailed October 3, 2002, applicants have amended the claims of their application in an earnest effort to place this case in condition for allowance. Specifically, independent claim 1, and dependent claims 6 and 12, have been amended. Reconsideration is respectfully requested.

In the Action, the Examiner rejected claims 6 and 12 under 35 U.S.C. §112, with reference to the limitations recited therein regarding the quantity of the polymeric coating applied to the associated spunbond polypropylene nonwoven fabric layer. While it is believed that those skilled in the art would understand that these claims call for the thickness of the coating to correspond to the basis weight specified in these claims, these claims have been amended to recite the basis weight of the polymeric coating. It is believed that the rejection of these claims can now be withdrawn.

In the Action, the Examiner has rejected the pending claims under 35 U.S.C. §103, with reliance upon U.S. Patent No. 6,133,168, to Doyle et al., in view of U.S. Patent No. 5,308,691, to Lim et al. However, it is respectfully submitted that even when combined,

these references fail to teach or suggest applicants' novel laminate construct as claimed, and accordingly, the Examiner's rejection is respectfully traversed.

As discussed in the Specification, the present nonwoven/film laminate construct is particularly suited for use as a so-called "house wrap", that is, a sheet material which is applied to a structure during construction to protect it from the elements prior to completion, and to serve as protection against excessive air infiltration after completion of the construction, thus enhancing the effectiveness of the building's insulation material. In addition to liquid water impermeability and resistance to air infiltration, this type of material must exhibit a minimum moisture vapor transmission rate (MVTR) to insure that water vapor that may infiltrate the wall cavity can escape, and must also exhibit sufficient strength to withstand wind forces, as well as the stress to which the material is subjected during construction.

The deficiencies in the principal Doyle et al. reference in teaching or suggesting the present invention are readily apparent. As acknowledged by the Examiner, Doyle et al. does not teach or suggest the use of a substrate comprising spunbond polypropylene, in accordance with the present invention, and thus does not contemplate use of a substrate which can be economically formed, while exhibiting the requisite strength and durability provided by the spunbond polypropylene substrate of the present invention.

Perhaps more significantly, the teachings of Doyle et al. are specifically limited to the use of a *primer* intermediate the substrate and monolithic layers of the disclosed construction.

As discussed at column 1, lines 32 *et seq.*, Doyle et al identifies shortcomings in the prior art by stating:

> While monolithic breathable polymer films are known in the prior art, it is also known that such films, when applied to substrates utilizing the heat and pressure associated with conventional lamination processes, *often delaminate from the supporting substrate* (emphasis applied).

At column 3, lines 29 *et seq.*, Doyle goes on to state:

> A *critical aspect* of the present invention comprises the use of a *primer layer* to ensure the adhesion of the extrusion coated breathable polymer onto the substrate. The need for such a primer layer is unexpected, as evidenced by the prior art which is replete with disclosures describing the deposition of an extrusion coated layer of polymer directly onto a substrate. According to the instant invention, it has been discovered that a monolithic, extrusion coated breathable polymer layer deposited directly onto a [sic] application of heat and pressure, will not adhere aggressively to the substrate without the use of the disclosed primer. (Emphasis applied.)

In significant distinction, the present application discloses the use of monolithic film layers, including EVA (ethylvinylacrylate), EBA (ethylbutylacrylate), and EMA (ethylmethylacrylate), which when used in combination with the claimed polypropylene spunbond substrate, provide strong adhesion without resort to the use of primers. As a consequence, the present invention contemplates a construct which can be much more cost-effective for commercial applications. It is important to keep in mind that the contemplated use of the present laminate as a "house wrap" for construction projects necessarily requires the use of many square yards of the laminate material, and thus, its cost-effective manufacture is very important to its viable use.

Acknowledging the shortcomings in the teachings of Doyle et al., the Examiner has relied upon the secondary Lim et al. reference. However, it is clear that this reference does not teach or contemplate a laminate material comprising a nonwoven fabric layer, and a *monolithic film coating*, as specifically set forth in the present pending claims.

As noted by the Examiner, the "Abstract" of Lim et al. describes a composite sheet:

> Controlled porosity composite sheets comprising a melt-blown polypropylene *fiber web* having a spun-bonded polypropylene *fiber sheet* laminated to at least one side thereof are made by calendering . . . . (emphasis supplied).

Because Lim et al. contemplates a meltblown/spunbond laminate construct, the fibrous nature of the construct is not completely water impervious, and thus does not provide the desired level of water impermeability as to be effective for use as a house wrap. Moreover, because this reference contemplates the use of two fibrous layers, it is clear that its teachings do not overcome the deficiencies in the teachings of the principal Doyle et al. patent in teaching or suggesting the present invention as claimed. There is clearly no teaching or suggestion in Lim et al. of applying a monolithic film layer to an associated spunbond polypropylene substrate, as claimed, in order to achieve a cost-effective laminate construct. As will be recognized by those familiar with the art, the present construct, as claimed, can be manufactured by a "in-line process", that is, manufactured by application of the monolithic film to the spunbond polypropylene substrate downstream of the surface on which the filamentary polypropylene material is collected and consolidated, without winding and unwinding, or other collection of the polypropylene substrate prior to application of the monolithic film.

In view of the foregoing, formal allowance of claims 1-13 is believed to be in order and is respectfully solicited. Should the Examiner wish to speak with applicants' attorneys, they may be reached at the number indicated below.

The Commissioner is hereby authorized to charge any additional fee which may be required in connection with this submission to Deposit Account No. 23-0785.

Respectfully submitted,

By _____
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CERTIFICATE OF MAILING

I hereby certify that this Amendment is being deposited with the United States Postal Service with sufficient postage at First Class Mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231 on **February 3, 2003**.

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1. A laminate material comprising a spunbond polypropylene nonwoven fabric layer, and a monolithic, acrylate/polyester breathable coating applied to said polypropylene nonwoven fabric layer in direct contact with spunbond polypropylene of said nonwoven fabric layer, said breathable film coating exhibiting substantial impermeability to liquid, water, and to air, while exhibiting significant permeability to water vapor.

6. A laminate material in accordance with claim 1, wherein:
said polymeric breathable coating is extrusion-coated on said nonwoven fabric layer, and has a basis weight of about 15 to 10 grams/meter^2, said coating comprising by weight from about 35 to 90 percent of a copolymer selected from the group consisting of ethylmethylacrylate, ethylbutylacrylate, and ethylvinylacrylate, and from about 10 to 65 percent of a co-polyester or thermoplastic elastomer selected from the group of co-polyether-ester and co-polyester-ester block copolymers.

12. A laminate material in accordance with claim 10, wherein the polymeric coating has a basis weight in the range of 22 to 28 grams/meter^2.